SYLLABUS

Instructor: Prof. Matt Rhode Aerospace Engineering and Sciences

AERO 155a rhodem@colorado.edu

Office Hours: 5:30-6:30 p.m. Tuesdays AERO 155a

TAs: Sydney "Shay" Meyer sydney.mayer@colorado.edu

Benjamin Brandenburger bebr9097@colorado.edu

Meeting Times: Lectures: Tuesday & Thursday 4:10 – 5:20 p.m.

All classes meet in room AERO N100

:

AERO N200 Projects space accessible after hours by Buff OneCard with PILOT tour training

Course Description:

The purpose of this course is to provide you an introduction to engineering through two projects, one individual and one done in teams, culminating in a stratospheric payload flight on a high-altitude balloon. You will learn in a hands-on way valuable engineering skills including communication skills, how to function in teams, and a variety of computer tools as appropriate to your projects, such as programming microcontrollers, dynamic modeling software, and co

Project Budget:

The budget for your main design projects will come from the College of Engineering.

Final Exam: The final exam will be held remotely on 5/8/2023, from 1:30-4:00 p.m. It will consist of one comprehensive problem that ties together everything you have learned in the course. It will be open note, book, internet, and will be held as a Canvas quiz with an uploadable document (your solutions). You are expected to complete this assignment without the help of others. NO COLLABORATION.

Miscellaneous:

f There is no **textbook** for this course, but outside reading of selected titles is required as a homework. You may purchase hard copies, utilize a library, or e-reader options. The three titles this semester are:

fRocket Boys
fHomer H. Hickam Jr.fFrom the Earth to the Moon
fJules VernefSeven Eves
fNeal Stephenson
Jared Leidich

- In addition, each student will be **expected to pay up to a total of \$75** (inclusive of the individual kits, i.e., no more than \$25 after kit) TOTAL towards supplies and **expenses** for the projects, inclusive of the fiction/biography book. Almost all costs are covered by the College of Engineering and the Ann & H.J. Smead Aerospace Engineering Sciences Department.
- f Each student will be required to purchase an individual hardware kit (cost \$50).
- f Each team will be provided multiple **kits** containing electronics and sensors needed for the two major projects. Students may keep their "shields", but reusable items such as sensors, microcontrollers, cameras, and tools need to be returned on the final lecture. If hardware is not returned, the student will receive a "0%" for their "individual contributions" grade, representing 5% of their grade.
- The First Year Projects spaces serve ASEN 1400/ASTR 2500, ASEN 1403 & senior and graduate projects spaces. They are excellent facilities and you are expected to maintain them in excellent condition. This means it is YOUR responsibility to ensure that the classroom and your work area in particular are **cleaner** than when you arrived. It does not matter whether you made the mess, you should clean it up and take pride in your workspace. A full class schedule is posted on the classroom doors. If a group is found interrupting other classes, their grade will be adversely affected. The two main projects spaces will be the clasCC-10 (c)6 (la)6 (s)1 (C)E-m: Cureu>2 (o78)-2 (a)4-T*W(s)

Several other **workshops** throughout the semester al

practice hand hygiene,

follow public health orders, and

if sick and you live off campus, do not come onto campus (unless instructed by a CU Healthcare professional), or if you live on-campus, please alert <u>CU Boulder Medical Services</u>.

Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policies on COVID-19 Health and Safety and classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please see the "Accommodation for Disabilities" statement on this syllabus.

Before returning to campus, all students must complete the <u>COVID-19 Student Health and Expectations Course</u>. Before coming on to campus each day, all students are required to complete a Daily Health Form.

Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home and complete the <u>Health Questionnaire and Illness Reporting Form</u> remotely. In this class, if you are sick or quarantined,

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see Temporary Medical Conditions on the Disability Services website.

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violence), stalking, or protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, anonymous reporting, and the campus resources can be found on the OIEC website. Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, **if you have religious obligations, please notify me by email during the first week of class. We will work on a plan to accommodate those obligations together.**

See the <u>campus policy regarding religious observances</u> for full details.